

## **REMARKS**

In response to the above-identified Office Action ("Action"), Applicant traverses the Examiner's rejection of the claims and seeks reconsideration thereof. Claims 1-14 are pending in the present application. Claims 1-14 are rejected. In this response, claims 1 and 10 are amended, claim 12 is cancelled and claim 15 is added.

### **I. Claim Amendments**

Applicant respectfully submits herewith amendments to claims 1 and 10 and new claim 15. Support for the amendments to the claims may be found, for example, on page 3, line 37 continuing to page 4, line 1; page 4, line 34 to page 5, line 4 and Figure 2 of the Application. For example, page 3, line 37 to page 4, line 1 supports the elements of the wire not being in contact with the tube.

Claim 10 is amended to make the claim in independent form. The features of amended claim 1 have been added to the claim 10, and it is further recited in claim 10 that the probe comprises "a body with an outside face having at least one groove" and that the heater resistance is "secured in the at least one groove." In addition to the portions of the Application recited above, support for the amendments to claim 10 may be found, for example, on page 5, lines 31-36 of the Application.

Applicant respectfully submits the amendments do not add new matter and are supported by the specification. Accordingly, Applicant respectfully requests consideration and entry of the amendments to claims 1, 10 and new claim 15.

### **II. Claim Rejections - 35 U.S.C. §112**

In the outstanding Action, claims 1-14 are rejected under 35 U.S.C. §112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Applicant has amended claim 1 to replace the language "the various strands of wire" with clearer language. Applicant believes the amendments to claim 1 place claims 1-11, 13 and 14 in compliance with 35 U.S.C. §112.

Applicant therefore respectfully requests reconsideration and withdrawal of the rejection on this basis.

### III. Claim Rejections - 35 U.S.C. §103

Claims 1-14 are rejected under 35 U.S.C. §103 as being unpatentable over U.S. Patent No. 4,934,831 issued to Volbrecht (“Volbrecht”) in view of U.S. Patent No. 5,183,079 issued to Blin (“Blin”). Applicant respectfully traverses the rejection.

To establish a *prima facie* case of obviousness, the Examiner must set forth “some articulated reasoning with some rational underpinning to support the conclusion of obviousness.” See KSR International Co. v. Teleflex Inc., 82 USPQ2d 1385, 1396 (2007). In combining prior art elements to render the claimed combination of elements obvious, the Examiner must show that the results would have been predictable to one of ordinary skill in the art. See Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103, Section III(D), issued by the U.S. Patent and Trademark Office on October 10, 2007.

Claim 12 is cancelled therefore the rejection of claim 12 on this basis is moot.

In regard to independent claim 1, Applicant respectfully submits that Volbrecht and Blin fail to disclose or render predictable a heater resistance for heating a solid part including at least the elements of “a tube enclosing a single electric wire, said wire being folded over to form a plurality of strands without contacting the tube, wherein the wire is received in an electrically insulating material, such that the plurality of strands are separated from one another by said electrically insulating material” as recited in amended claim 1.

In a heater resistance, it is mandatory that the heating wires are electrically insulated from the external metallic tube. Further, the specific arrangement that a single wire is folded over to form a plurality of strands as recited in claim 1 makes the device very efficient as a heater resistance.

In addition, in a heater resistance, the heating wires are submitted to a power supply in specific voltage to transform by Joules effect the electrical power in thermal power. Specific

material for the wire and specific insulators (for the dielectric strength performance) must be used for a heater resistance to support the Joules effect, this is in contrast to thermocouples such as those Volbrecht which are used without any electrical power supply or as temperature sensor with very low electrical power supply (around 5mA).

The structure of the device disclosed in Volbrecht is therefore very different as it is to be used as a temperature sensor. In particular when used as a thermocouple, the sensor of Volbrecht comprises at least two different wires, made of different material, and welded to the interior face of the external tube (see e.g., Fig. 1; col. 2 line 63 to col.3 line 1, and col. 4 lines 32-35).

In particular, the temperature sensor disclosed in Volbrecht comprises wires made of lead. Lead wires are not resistance wires adapted for providing heat through Joule effect as is required by the wires of claim 1. In addition, Volbrecht does not disclose that any of the wires are folded over to form a plurality of strands without contacting a tube enclosing the wire as further required by claim 1.

Rather, the electrical wires of Volbrecht are welded together and also welded to the interior face of the external tube (see Fig. 1, and the passages from col. 2, line 65 to col. 3, line 1 and col. 4, lines 8-9). Applicant further notes that the wires and the tube of Volbrecht are all at the same potential. This is not acceptable for a heating cable mounted on metallic body sensors where an electrical insulation between the wires and the tube is requested and mandatory.

Accordingly, for at least the foregoing reasons, the device in Volbrecht does not include each of the elements of claim 1 and may not be operated as a heater resistance as claimed.

In regard to independent claim 10, Applicant respectfully submits that Volbrecht fails to disclose or render predictable at least the elements of “[a] probe to be mounted on board a vehicle for measuring an air flow parameter, including temperature, the probe comprising a body with an outside face having at least one groove and at least one heater resistance being secured in the at least one groove, wherein the heater resistance comprises: a tube enclosing a single electric wire, said wire being folded over to form a plurality of strands without contacting the tube, wherein the wire is received in an electrically insulating material, such that the plurality of

strands are separated from one another by said electrically insulating material” as recited in amended claim 10.

Claim 10 relates to a temperature probe which comprises the heater resistance as defined in claim 1. For at least the reasons previously discussed in regard to claim 1, Volbrecht fails to disclose a heater resistance including a tube enclosing an electrical wire which is folded over to form a plurality of strands as recited in claim 10.

Volbrecht further fails to disclose a probe having at least one groove on its outer surface, into which the claimed heater resistance can be positioned and which can be subjected to stressful working operations and to severe assembly techniques like brazing or welding while giving it excellent characteristics and features. See, for example, Application page 6, lines 11-24.

This particular arrangement of the heater resistance on a probe as recited in claim 10 is particularly advantageous as it enables the probe to be maintained at a given temperature, in particular at de-icing temperatures. See Application, page 5, lines 34-36 and page 6 lines 27-37.

The Examiner has further not pointed to, and Applicant is unable to discern, a portion of Blin curing the deficiencies of Volbrecht with respect to the above-discussed elements. Moreover, even if it were possible to find that Blin discloses these elements, and Applicant does not believe this is the case, Blin is non-analogous art and may not be combined with Volbrecht. In particular, Blin relates to a very different technical field, namely, a heat and fire resistant protective covering for hoses or cables.

Accordingly, for at least the foregoing reasons, the teachings of Volbrecht and Blin may not be combined to disclose each and every element of claims 1 and 10. Since each of the elements of claims 1 and 10 are not found within the prior art, a *prima facie* case of obviousness may not be established. Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 1 and 10 under 35 U.S.C. §103 over Volbrecht and Blin.

In regard to dependent claims 2-9, 11, 13 and 14, these claims depend from claim 1 or claim 10 and incorporate the limitations thereof. Thus, for at least the reasons that claim 1 and

claim 10 are not *prima facie* obvious over Volbrecht and Blin, claims 2-9, 11, 13 and 14 are further not obvious. Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 2-9, 11, 13 and 14 under 35 U.S.C. §103 over Volbrecht and Blin.

#### **IV. New Claim 15**

Applicant respectfully submits that independent claim 15 is further patentable over the cited prior art references for at least the reasons that, similar to claim 1, new claim 15 comprises elements distinguishing the claimed heater resistance from the temperature sensor disclosed by Volbrecht. In particular, claim 15 specifies how the wire is arranged and configured along the longitudinal direction of the heater resistance. Such characteristics of the wire are very advantageous for using the device as a heater resistance as disclosed on page 5, lines 4-10 of the Application. Volbrecht does not disclose nor suggest such specific arrangement and configuration of the wire within the metallic tube, which feature comes in addition to the other claimed distinguishing features already discussed. Blin further does not disclose these features. Accordingly, Applicant respectfully requests consideration and allowance of claim 15 at the Examiner's earliest convenience.

#### **V. PTO-892 Form Request**

Applicant respectfully notes that in the Office Action dated May 12, 2009, a new reference was cited, namely U.S. Patent No. 5,183,079 issued to Blin, however, the reference was not cited on a PTO-892 form by the Examiner. Applicant respectfully requests that the Examiner include a PTO-892 form listing the Blin reference in the next Office Action.

### CONCLUSION

In view of the foregoing, it is believed that all claims now pending, namely claims 1-11 and 13-15, are now in condition for allowance and such action is earnestly solicited at the earliest possible date. If there are any additional fees due in connection with the filing of this response, please charge those fees to our Deposit Account No. 02-2666. Questions regarding this matter should be directed to the undersigned at (310) 207-3800.

### PETITION FOR EXTENSION OF TIME

Per 37 C.F.R. 1.136(a) and in connection with the Office Action mailed on February 4, 2010, Applicant respectfully petitions Commissioner for a three (3) month extension of time, extending the period for response to August 4, 2010. The amount of \$1,110.00 to cover the petition filing fee for a 37 C.F.R. 1.17(a)(1) large entity will be charged to our Deposit Account No. 02-2666.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR, & ZAFMAN LLP

Dated: July 29, 2010

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### CERTIFICATE OF TRANSMISSION

I hereby certify that this correspondence is being submitted electronically via EFS Web to the United States Patent and Trademark Office on the date shown below.

 7/29/10  
Susan M. Manriquez July 29, 2010